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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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07/13/2005

Jun-mo Gil

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11/04/2008

THE NATH LAW GROUP

112 South West Street

Alexandria, VA 22314

EXAMINER

BAUSCH, SARAE L

ART UNIT

PAPER NUMBER

1634

MAIL DATE

DELIVERY MODE

11/04/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/531,271	Applicant(s) GIL ET AL.	
	Examiner SARAE BAUSCH	Art Unit 1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Currently, claims 1-13 are pending in the instant application. Claims 8-13 are withdrawn and claim 2 has been amended. This action is written in response to applicant's correspondence submitted 07/24/2008. All the amendments and arguments have been thoroughly reviewed but were found insufficient to place the instantly examined claims in condition for allowance. The following rejections are either newly presented, as necessitated by amendment, or are reiterated from the previous office action. Any rejections not reiterated in this action have been withdrawn as necessitated by applicant's amendments to the claims. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. **This action is Final.**

Sequence Rules

2. The amendment filed on 07/24/2008 to comply with the requirements of 37 CFR 1.821 through 1.825 is non-compliant. The CRF submitted on 07/24/2008 is defective. Applicant is required to thoroughly review the specification and comply with all sequence rules and submit a CRF. Additionally the amendment to the specification does not comply with 37 CFR 1.121 as the amendment to include sequence identifiers does not correctly address the location within the originally filed specification. The amendment submitted address the paragraphs in the published application however the amendment should specify the location of the paragraph in the originally filed specification, not the published application. Since the nature of the non-compliance does not preclude examination of the invention as the non-compliance is directed to instantly claimed

invention and since the reply appears to be bona fide and in the interest of compact prosecution the claims have been examined. However, for any response to this office action to be fully responsive, applicants are required to comply with sequence rules, as well as include the proper markings to indicate the changes that have been made to the specification to comply with 37 CFR 1.121.

Maintained Rejections

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection was previously presented and has been rewritten to address the amendment to the claims.

Claim 2 is vague and indefinite for the recitation of "characterized in that said marker is used with materials selected from the group consisting of... paint". Claim 2 appears to be drawn to a product comprised of a process and there it is unclear if claim 2 is drawn to a process or product. The recitation of characterized in that and the recitation of marker is used with materials appears to be a process step. As such it is unclear if the claim is intended to be limited to a product or process.

Response to Arguments

5. The response asserts that claim 2 has been amended to read marker is used with materials and thus claim 2 particular points out and distinctly claims a product. This response has been

thoroughly reviewed but not found persuasive. It is noted that the amendment to the claims does not distinctly claim a product as the product recites “marker is used with materials” which is a process step and thus it is unclear that the claim is directed solely to a product. If applicant is intending for the oligonucleotide to also comprise those materials recited in claim 2, claim 2 should be claimed such that the marker further comprises or is composed of the materials recited in claim 2.

6.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Dollinger et al. (US Patent 5451505). This rejection was previously presented in section 9 of the office action mailed 01/28/2008 and is reiterated below.

With regard to claim 1, Dollinger et al. teach a taggant which comprises a nucleic acid that has a specific nucleotide sequence that provides a means to store information (marker composed of oligonucleotides). Dollinger et al. teach taggants are added to substances. Dollinger et al. teach substances to include automobiles and automobile parts (see column 1, lines 20-27 and column 3, lines 65-68) (vehicle identifying markers). Dollinger et al. teaches the taggants may be covalently bound to a solid support such as latex beads, dextran or magnetic

beads or encapsulated by polymeric substances or lipophilic compositions (see column 2, lines 24-29) (oligonucleotides to which phase transfer agent is bound).

With regard to claim 2, Dollinger et al. teach the substances that contain the taggants (nucleic acids bound to a phase transfer agent) are paint products. It is noted that any paint product could be applied to a vehicle or could be used to coat a vehicle. Therefore the paint product taught by Dollinger et al. includes vehicle paint product and vehicle coating solution.

With regard to claim 3-4, Dollinger et al. teach a taggant sequence that comprises an oligonucleotide composed of a unique sequence of one strand and primer sequences located at both ends of the unique sequence (see table 1, taggant sequence and column 6, lines 64-68). Dollinger et al. teach the nucleic acid taggant will be at least 20 bases in length to adequately specify any taggant (coding sequence is 10 to 50 base pairs) (see column 5, lines 5-11).

With regard to claims 5-6, Dollinger et al. teach a taggant that is a combination of two primers and a unique sequence (see table 1, taggant sequence, column 6 lines 64-68) (three kinds of oligonucleotides with different base sequences).

With regard to claim 7, Dollinger et al. teach derivatized nucleotides, including methyl or phosphonate oligodeoxynucleotides and phosphorothioate oligodeoxynucleotides (oligonucleotide combined with protective groups (derivatized nucleotides) which blocks reactivity).

Response to Arguments

9. The response traverses the rejection on page 13 of the remarks mailed 07/24/2008. The response asserts that the taggant of Dollinger may cause modification of oligonucleotide bases during extraction and recovery of oligonucleotides which in turns harms amplification with the

exact sequence. The response further asserts that the taggant encapsulated by polymeric proteins which are different from the structure of the oligonucleotide-phase transfer agent. This response has been thoroughly reviewed but not found persuasive. It is noted that the claims are drawn to a product and not a method and thus the remarks with regard to extraction and recovery of oligonucleotides which in turns harms amplification is not applicable, as the claims are not drawn to a method of amplification using the vehicle identifying marker, as appears to be asserted by applicant. Furthermore, the claims are drawn to a vehicle identifying marker composed of oligonucleotide to which phase transfer agent is bound. The claims are not limited to a vehicle identifying marker consisting of oligonucleotide, thus the oligonucleotide to which a phase transfer agent is bound can comprise addition components and furthermore the specification does not define nor do the claims limit the type of phase transfer agent to which the oligonucleotide is bound, thus an oligonucleotide bound to an encapsulated polymeric protein encompasses an oligonucleotide bound to a phase transfer agent. Furthermore, Dollinger does not teach that the oligonucleotides necessarily encompasses polymeric proteins or lipophilic compositions, as Dollinger teaches that the oligonucleotide may be covalently bound to a solid support such as latex beads, dextran or magnetic beads *or* encapsulated by polymeric substances or lipophilic compositions (see column 2, lines 24-29) therefore, Dollinger anticipates the claimed invention.

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

10. Claims 1 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Le Page et al. (WO 87/06383, cited on IDS). This rejection was previously presented in section 10 of the office action mailed 01/28/2008 and is reiterated below.

With regard to claim 1, Le Page et al. teach an article labeled with a tag to which a signal compound is attached (see page 5, 2nd full para.) Le Page et al. teach the signal compound may be attached to an adhesive or paper (oligonucleotide to which phase transfer agents is bound) (see page 5, 1st and 2nd full para). LePage et al. teach the tag and signal compounds are nucleic acids (see pg. 5 last para. con't to page 6). Le Page et al. teach the substance comprising the tag and signal can be any substance including parts for cars (see pg. 4 last para con't to page 5) (vehicle identification marker).

With regard to claim 5-6, Le Page et al. teach an item is labeled with a signal DNA in which there are two or more signal DNAs that is genuine. Le Page et al. teach the signal DNA is mixed with another DNA (see pg. 9, last para. con't to 1st para) (vehicle identifying marker that is a combination of different base sequences of two or more, combination of three).

Response to Arguments

11. The response traverses the rejection on page 14 of the remarks mailed 07/24/2008. The response asserts that paper or adhesive of Le Page are different from the phase transfer agent of the instant claims and thus Le Page does not teach each and every element of the instant claims. This response has been thoroughly reviewed but not found persuasive. It is noted that the claims are drawn to a vehicle identifying marker composed of oligonucleotide to which phase transfer agent is bound. The claims do not limit the type of phase transfer agent to which the

oligonucleotide is bound, thus an oligonucleotide bound to a signal compound attached to an adhesive or paper encompasses an oligonucleotide bound to a phase transfer agent.

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dollinger (US Patent 5451505). This rejection was previously presented in section 13 of the office action mailed 01/28/2008 and is reiterated below.

Dollinger et al. teach a taggant which comprises a nucleic acid that has a specific nucleotide sequence that provides a means to store information (marker composed of

oligonucleotides). Dollinger et al. teach taggants are added to substances. Dollinger et al. teach substances to include automobiles and automobile parts (see column 1, lines 20-27 and column 3, lines 65-68) (vehicle identifying markers). Dollinger et al. teaches the taggants may be covalently bound to a solid support such as latex beads, dextran or magnetic beads or encapsulated by polymeric substances or lipophilic compositions (see column 2, lines 24-29) (oligonucleotides to which phase transfer agent is bound). Dollinger et al. does teach a composition of tagged substances wherein the taggant is a nucleic acid and the substance is paint products. Dollinger et al. does not teach a composition of vehicle painting dye or vehicle coating solution.

Therefore, it would be have been prima facie obvious to the ordinary artisan at the time the invention was made to include vehicle painting dye and vehicle coating dye in the composition as Dollinger teaches taggants can be added to either automobiles, automobile parts, and paint products. The ordinary artisan would have been motivated to include vehicle painting dye and vehicle coating dye as Dollinger teaches that both automobile part and paint products can contain taggants. Additionally, the ordinary artisan would have had a reasonable expectation of success since the compositions taught by Dollinger include both automobiles and paint products, which are encompassed by vehicle painting dye and vehicle coating dyes.

Response to Arguments

15. The response traverses the rejection on page 15-16 of the remarks mailed 07/24/2008. The response asserts that the examiner has failed to articulate an adequate rationale for the reasonable expectation of success of the ordinary artisan. This response has been thoroughly reviewed but not found persuasive. The examiner addresses that since Dollinger teaches

compositions that are used in both automobiles as well as paint products, one of ordinary skill in the art would have a reasonable expectation of success that the composition of Dollinger et al. can be used in automobile paints.

The response asserts that the examiner vaguely states that the ordinary artisan would refer to a ten year old reference and be motivated to include vehicle painting dye in both automobile parts and paint products which can contain taggants. The response asserts that the examiner has not addressed the deficiency of Dollinger such as the modification of bases during extraction and recovery of oligonucleotides which harms amplification. The response further asserts the examiner has failed to state why one of skill in the art would find such a potential acceptable. This response has been thoroughly reviewed but not found persuasive. In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977). Furthermore, in response to applicant remarks regarding the examiner has not addressed the deficiency of Dollinger that when covalently bound to a solid support bases modification of bases can occur during extraction and recovery of oligonucleotide, it is noted that the features upon which applicant relies (i.e., ability to extract and recover oligonucleotides) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is noted that the claims are not drawn to a method of using the vehicle identifying markers, the claims are merely drawn to a product which encompasses oligonucleotides bound to phase transfer agents. Thus Dollinger

teaches an oligonucleotide attached to a phase transfer agent, as address above. Furthermore, Dollinger teaches taggants in both automobile parts and paint substances thus it would have been obvious to include the taggant in a paint substance used for an automobile, which is stated in the rejection above.

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Le Page (WO87/06383, cited on IDS). This rejection was previously presented in section 14 and is reiterated below.

Le Page et al. teach an article labeled with a tag to which a signal compound is attached (see page 5, 2nd full para.) Le Page et al. teach the signal compound may be attached to an adhesive or paper (oligonucleotide to which phase transfer agents is bound) (see page 5, 1st and 2nd full para). LePage et al. teach the tag and signal compounds are nucleic acids (see pg. 5 last para. con't to page 6). Le Page et al. teach the substance comprising the tag and signal can be any substance including parts for cars or art work.(see pg. 4 last para con't to page 5) (vehicle identification marker).

Le Page et al. does not teach a composition of vehicle painting dye or vehicle coating solution.

Therefore, it would be have been prima facie obvious to the ordinary artisan at the time the invention was made to include vehicle painting dye and vehicle coating dye in the

composition taught by Le Page as Le Page teaches signal compounds can be added to any substance, including art work and car parts. The ordinary artisan would have been motivated to include vehicle painting dye and vehicle coating dye as Le Page teaches signal compounds can be added to any substance, including art work and car parts. Additionally, the ordinary artisan would have had a reasonable expectation of success since the compositions taught by Le Page include both car parts and art work, which are encompassed by vehicle painting dye and vehicle coating dyes.

Response to Arguments

17. The response traverses the rejection on page 16-17 of the remarks mailed 07/24/2008. The response asserts that the examiner has failed to articulate an adequate rationale for the reasonable expectation of success of the ordinary artisan. This response has been thoroughly reviewed but not found persuasive. The examiner addresses that since LePage teaches compositions that are used in both art work and car parts, one of ordinary skill in the art would have a reasonable expectation of success that the composition of LePage et al. can be used in automobile paints. The response does not provide any reason as to why there would not be a reasonable expectation of success, for example the response does not provide any rational or reasons to show that the claimed subject matter would have been nonobvious.

The response asserts that the paper or adhesive of LePage is different from the phase transfer agent and asserts that the examiner refers to a reference published twenty one years ago and vaguely states that the ordinary artisan would have been motivated to arrive at the instant subject matter. This response has been thoroughly reviewed but not found persuasive.

In response to applicant's argument based upon the age of the references, contentions that the reference patents are old are not impressive absent a showing that the art tried and failed to solve the same problem notwithstanding its presumed knowledge of the references. See *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977). Furthermore, in response to applicant remarks regarding the examiner has not addressed the differences of LePage that paper or adhesive is different from the phase transfer agent in that the PTA neutralizes negative charges of oligonucleotides, it is noted that the claims are drawn to a vehicle identifying marker composed of oligonucleotide to which phase transfer agent is bound. The claims do not limit the type of phase transfer agent to which the oligonucleotide is bound, thus an oligonucleotide bound to a signal compound attached to an adhesive or paper encompasses an oligonucleotide bound to a phase transfer agent. Thus LePage teaches an oligonucleotide attached to a phase transfer agent, and further LePage teaches that the oligonucleotide can be used in art work as well as automobile parts, thus it would have obvious as well as a reasonable expectation of success that the composition of LePage could be used in an automobile part, such as automobile paint, which is stated in the rejection above.

For these reasons, and the reasons made of record in the previous office actions, the rejection is maintained.

Conclusion

18. No claims are allowable.

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARA E BAUSCH whose telephone number is (571)272-2912. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

/Sarae Bausch/
Primary Examiner, Art Unit 1634